

Regional Responses on the Value of Protecting Ecological Systems & Services

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SAB C-VP ESS Charge

- To assess Agency needs & state of science
- To identify key areas for improving knowledge, methodologies, practice and research
 - To provide needs assessments supporting national regulations
 - To identify regional needs for assessment & communication
 - To identify communication & assessment needs to Congress & the public regarding the value of protecting ecological systems and their services



Survey Questions

1. What activities in your Region, states, or tribes have impacts on ecological systems and services?
2. For each, what kinds of science-based information on the values of these impacts do you need for carrying out these activities?
3. How have the need for this information been met in the past?



Survey Questions

4. Are there efforts underway now to develop capabilities to value the protection of ecological systems and their services?
5. Can you identify any documents or example projects that describe science-based information on the impacts of activities on ecological systems and their services that you think the Committee would benefit from considering in depth?



Survey Distribution

- 5 survey questions forwarded to Agency workgroups in July
 - National Regional Science Council
 - Regional Science Liaisons
 - Hazardous Substance Technical Liaisons
 - Ecological Risk Assessment Forum
 - Regional Ecosystem Protection Network
 - Tribal Science Council
- Regional groups/programs
 - Regional Science Councils
 - NEPA/Water Quality/Wetlands/TMDL/Superfund



EPA Regional Activities Linked to Ecological Protection

- Permitting
- Enforcement
- Water Quality & Quantity
- Wetlands
- National Environmental Policy Act
- Superfund/Brownfields/RCRA/UST



EPA Regional Activities Linked to Ecological Protection (cont')

- Oil Pollution Act
- Tribal/State Interactions
- Land-Use
- Invasive Species
- Grants



Innovative Science Methods

- Modeling
- GIS Mapping
- Other Federal Agencies
- Compensation from Polluters
- NGOs/States/Tribes/Academia
- EMERGY
- Conservation/Restoration/Enhancement
- Assessment methods for headwater/intermittent & ephemeral streams



Science & Research Needs

- Tools to Identify Critical Ecosystems
- Quantitative Impact Information
- Ecological thresholds
- Definition of Significant Impact
- Accounting for Indirect Effects
- Definition of ecological systems and services



Science & Research Needs (cont')

- Method to combine ecological significance with monetary value, especially for wetlands
- Greater access to local academicians
- Results of NAS/NRC Study on valuing aquatic resources
- Standard methods & protocols
- Communication tools



Science & Research Needs (cont')

- More rigorous alternatives analyses
- Public education & outreach
- Effects of hybrid poplars
- Invasive/exotic control
- Toxicity testing for surrogate species



Additional Observations

- In general, Regions are unfamiliar with this language
- There is no one program where this information resides
- Cross-media, cross-programmatic issues
- Standardized approach & protocols are essential
- Communication tools should be developed



Additional Observations (cont')

- Regions excited with this activity and curious about next steps
- Regions 4,5, & 7 appear ahead of the curve-can we use their efforts in other Regions?
- Regions are supportive of translating ecosystems & services into dollar amounts
- Wetland functions & values-a good case study?



Additional Observations (cont')

- Economic valuation not explicit in environmental regulations-except for NEPA
- Technical transfer opportunity to local governments regarding land use planning & decision-making
- Communication of research needs to ORD

